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	Group Art Unit	3722	
	Examiner Name	Erica Cadugan	
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Firm or Individual name	<u>Corinne R. Gorski (Reg. No. 34,339)</u> Nixon Peabody LLP 8180 Greensboro Drive Suite 800 McLean, VA 22102
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PATENT
742407-4

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re PATENT application of:

Daniel David YOUNG et al.

Application No.: 09/270,688

Filed: March 16, 1999

For: METHOD AND SYSTEM FOR FORMING
CUSTOM SHOE INSOLES

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) Examiner: Erica Cadugan

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) Group Art Unit: 3722

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) Date: November 4, 2002

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REPLY BRIEF

Commissioner of Patents
Washington, D.C. 20231

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Sir:

This is in response to the Examiner's Answer dated August 2, 2002. A one-month extension of time to respond was granted by the U.S. Patent & Trademark Office on October 9, 2002. The extended date for filing this Reply Brief has been extended to November 2, 2002 (a Saturday). Three (3) copies of this brief are enclosed.

I. SUMMARY OF THE INVENTION

In the Examiner's Answer, the Examiner takes the position that the Summary of the Invention in Appellant's Appeal Brief is deficient because Appellant asserts that the "system and method of the present invention can be used to manufacture a custom made insole based on a foot in it's natural, uncompressed state with high-dimensional accuracy." The Examiner does not consider the specification as originally filed to support the above language.

Appellants respectfully disagree with the Examiner. Referring to the term "uncompressed state", it appears that the Examiner considers non-compressed to mean non-weight bearing. Appellants did not assert that the foot was in a non-weight bearing state during scanning. With the present system, the foot to be scanned is placed on the scanner with the user

grasping a support bar. The specification as originally filed is replete with reference to the customer placing his/her foot on the base while stabilizing him or herself with a bar 22 “during the scanning operation.” See page 5, third full paragraph. In order for the natural size and shape of the foot to be measured there must be *some* weight bearing on the foot. The fact that the safety glass 114 is designed to support a customer weighing up to 500 lbs, see page 10, first full paragraph, does not teach away from this. It is recognized that a customer will have to place his/her weight on the base at some time, i.e., while stepping onto the machine. However, the support bars are provided to be held by the customer to during the scanning operation.

Moreover, even when the foot is in a weight-bearing state, there are certain areas of the foot that will be inherently non-compressed for some users, i.e., the arch and the top of the foot. Thus, the foot can be non-compressed in a weight bearing state. Importantly, with the present system, the foot is not encased in a compressive device which would compress the foot in addition to being in a weight, either partial or full, bearing state.

Appellants respectfully submit that the specification as originally filed supports such, and the Summary of the Invention as set forth in Appellants’ Appeal Brief, is not deficient.

The Examiner notes in the first paragraph of page 3 of the Examiner’s Answer that “bar 22 can be used to help a person retain their balance even with *full weight* on the foot” (emphasis added). No where, in the specification as originally filed or in the Summary of the Invention of Appellant’s Appeal Brief is it stated that the foot being scanned bears the “full weight” of the customer.

II. PRIOR ART REJECTIONS

A. The Rejection of Claim 13 under 35 U.S.C. 102(b) as being Anticipated by U.S. Patent No. 5,088,864 to Yanagida.

As fully set forth in the Appeal Brief, claim 13 is not anticipated by Yanagida. Claim 13 recites a system for forming a custom-made insole including at least one scanning station for supporting a foot to be measured. The at least one scanning station includes at least one movable laser scanning unit for determining coordinates of an undersurface of the foot by directing at least one line of laser light along the undersurface. At least one insole-milling station is in communication with the at least one scanning station. The at least one milling station includes a milling assembly for forming the custom-made insole, and control means for controlling the

operation of the milling assembly based upon the coordinates determined by the at least one laser scanning unit.

The Examiner states that, "If the prior art is capable of performing the intended use, then it meets the claim." See, page 5, first paragraph, of the Examiner's Answer. For the reason's set forth herein, Yanagida's device is not capable of performing the intended use, i.e., scanning the undersurface of a foot with a movable laser scanning unit. Appellant's fully set forth in the Appeal Brief that Yanagida does not disclose or suggest "at least one laser scanning station having at least one movable laser scanning unit," as recited in claim 13. In Yanagida's device, the user is supported in a chair with the body part to be scanned within the path of camera's 12A, 12B. Cameras 12A, 12B are not movable with respect to the person's face. The person's face must be correctly aligned with a center line 15 on the monitor. See column 3, lines 52 through column 4, line 2. In order to maintain the correct alignment, the monitor is moved or the chair is repositioned, *not* the camera, which the Examiner appears to consider to be the mechanical equivalent of the claimed "at least one movable laser scanning unit" as recited in claim 13. To maintain the correct alignment the person must be positioned precisely and supported in the chair.

Thus, in order for Yanagida's camera's to be movable, Yanagida's system would have to be redesigned. Appellant's have asserted that no motivation exists for redesigning Yanagida's system. In response, the Examiner states on page 10, paragraph 2, that it is not necessary to provide such a motivation. This is perplexing.

Conveniently, the Examiner dismisses the claimed limitations of "shoe insole" and "foot" as being functional. Yanagida teaches scanning the *front side* of a person's face, upper body or entire body. See column 5, lines 36-40. Appellant's respectfully submit that scanning the *under surface* of a person's *foot* to create a *shoe insole* are not merely functional recitations, but legitimate claim limitations of which are not disclosed by Yanagida.

As fully set forth in the Appeal Brief, Yanagida does not disclose or suggest "at least one scanning station includes at least one movable laser scanning unit for determining coordinates of an undersurface of the foot by directing at least one line of laser light along the undersurface" as recited in claim 13. Hence, claim 13 is allowable over Yanagida.

B. The Rejection of Claims 1, 4, 6 and 7-29 under 35 U.S.C. 103(a)
Over U.S. Patent No. 5,449,256 to Sundman in view of
U.S. Patent No. 5,712,803 to Garuet-Lempirou.

Appellants stated in the Appeal Brief, that a true image of a foot is obtained by imaging a foot in a non-weight bearing, non-compressed natural state. It appears that such language was confusing to the Examiner who interpreted such to read that Appellant was asserting that in the present system the foot was being scanned in a non-weight bearing position or “true” image. As fully set forth hereinabove, in the present system certain areas of the customer’s foot are not compressed during scanning, however, non-compressed was not intended to mean non-weight bearing.

With regard to claim 1, in the present method the surface coordinates of the undersurface detected by the at least one laser scanning unit are scanned. In contrast, as fully set forth in the Appeal Brief, with the system of Garuet-Lempirou the *surface coordinates of the undersurface detected by the scanning unit* are not scanned because the plate 40 deforms the rays associated with the cameras and it is not the actual surface coordinates which are scanned but rather the points distorted by the plate. See column 6, lines 36-67 through column 12, line 9. Therefore, Garuet-Lempirou fails to cure the deficiencies of Sundman.

Independent claim 17 recites “at least one scanning station including a base having a length for supporting the foot, and at least one movable laser scanning unit for determining coordinates of an undersurface of the foot by directing at least one line of laser light along the undersurface, the at least one laser scanning unit including a first and second side portion extending upwardly from the base along the length thereof.”

Sundman, does not disclose or suggest “at least one scanning station including a base having a length for supporting the foot” and “a first and second side portion extending upwardly from the base along a length thereof,” as recited in amended claim 17

The Examiner states that Garuet-Lempirou discloses a base 40 for supporting the foot and a cradle 2 having first and second side portions. Appellants have not misunderstood the Examiner’s interpretation in stating that the side portions of Garuet-Lempirou’s cradle 2 do not “extend upwardly **from** the base.” The side portions of Garuet-Lempirou’s cradle extend upwardly **from** the base of cradle 2 *not* base 40 which supports the foot. Therefore, claims 17-29 are allowable.

- C. The Rejection of Claims 1, 4, 6 and 7-29 under 35 U.S.C. 103(a) Over U.S. Patent No. 5,449,256 to Sundman in view of U.S. Patent No. 5,712,803 to Garuet-Lempirou and further in view of Applicant's Admitted Prior Art.

No motivation exists in either Sundman, Applicant's admitted prior art or Garuet-Lempirou to combine the references in the manner suggested by the Examiner. As set forth in MPEP Section 2143, just because references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Looking at Sundman, the Examiner has not set forth the necessary desirability to redesign the system to incorporate the laser based measuring, given that Sundman's system operates via a two-dimensional measurement. A substantial reconstruction and redesign of the elements shown in Sundman, as well as a change in the basic principle under which Sundman was designed to operate, would be necessary.

Moreover, it has been well established that whether the proposed modification or combination of the prior art has a reasonable expectation of success is determined at the time the invention was made. *Ex parte Erlich*, 3 USPQ2d 1011 (Bd. Pat. App. & Inter. 1986). Appellant's respectfully submit that no reasonable expectation of success would be available if the references were combined in the manner asserted by the Examiner.

For the reasons set forth herein and in the Appeal Brief, Appellants respectfully submit that claims 1, 4, 6 and 7-29 are allowable over the cited prior art.

- D. The Rejection of Claim 3 as being Unpatentable under 35 U.S.C. 103(a) Over U.S. Patent No. 5,449,256 to Sundman in view of U.S. Patent No. 5,712,803 to Garuet-Lempirou and Further in View of the Admitted Prior Art

As fully set forth in the Appeal Brief, neither Sundman, nor Garuet-Lempirou disclose the "step of scanning the undersurface of the foot comprises directing a non-focused fan-shaped line of laser light along the undersurface and sides of the foot." To cure the deficiencies of the primary references the Examiner relies upon the description of the prior art set forth in the specification at page 8, lines 11-15.

Once again, no motivation exists, absent Applicant's own teachings, to modify Garuet-

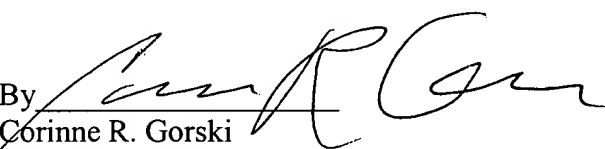
Lempirou to direct "a non-focused fan-shaped line of laser light along the undersurface" of the foot. Nor does the Examiner point to any specific teachings in Garuet-Lempirou or the admitted prior art to which would provide any support for the suggested modification. Appellant's respectfully assert that the proposed modification or combination of the prior art does not have a reasonable expectation of success, especially given the time the primary reference was made.

Therefore, Appellants respectfully submit that claim 3 is allowable over the prior art of record.

III. CONCLUSION

In formulating the rejections of the claims under 35 U.S.C. §§ 102(b) and 103(a), the Examiner fails to set forth a prima facie case of obviousness. Accordingly, the rejection of claims 1, 3, 4 and 6-29 should be reversed.

Respectfully submitted,

By 
Corinne R. Gorski
Reg. No. 34,339

NIXON PEABODY LLP
8180 Greensboro Drive,
Suite 800
McLean, Virginia 22102
Telephone: (703) 770-9321
Facsimile: (703) 770-9400